

Idaho 4th Grade Direct Mathematics Assessment

Minimal Problem-Solving Strategies

2004 4th GRADE MAIN RANGEFINDER 1

Minimal Evidence of Understanding of Situations

Your teacher will read the entire test to you before you begin.
Do not use a calculator on this assessment.

1. Jason has a notebook to record the number of birds he studies each year. Last year he recorded 987 bluebirds, 834 robins, 566 sparrows, and 1,028 crows.



- a. How many birds did he record altogether last year? *Show or explain how you found your answer.*

$$\begin{array}{r} 987 \\ 834 \\ + 566 \\ \hline 1,887 \end{array}$$

Birds that he recorded

- b. How many more crows did Jason see than bluebirds? *Show or explain how you found your answer.*

$$\begin{array}{r} 1,028 \\ - 987 \\ \hline 41 \end{array}$$

Minimal Development of Basic Skills

- c. Jason also saw 32 goldfinches each month. How many did he see at the end of four months? *Show or explain how you found your answer.*

$$\begin{array}{r} 32 \\ \times 4 \\ \hline 128 \end{array}$$

Inappropriate Processes

- d. Jason drew 21 birds in his notebook. He drew three birds on each page. How many pages did he need for all 21 birds? *Show or explain how you found your answer.*

$$\begin{array}{r} 21 \\ \div 3 \\ \hline 7 \end{array}$$

Computational Errors

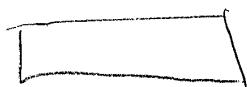
Read problems 2, 3, 4, and 5 on this and the next two pages. Select three problems to answer. Answer ALL of the parts of the three problems you select to answer. Cross out the one problem that you do not choose to answer.

2. a. Using a ruler, construct (draw) a **quadrilateral** that is **2 inches** wide and **3 inches** long. Measure carefully.



Difficulty with Basic
Mathematics Concepts

- b. Using a ruler, construct (draw) a **quadrilateral** that is **3 centimeters** wide and **6 centimeters** long. Measure carefully.



- c. Construct (draw) your own geometric shape. **Label** the measurements of each side.



3 and a half long
2 and a half wide

- d. What kind of geometric shape did you draw in part c?

triangle

3. The students in Mrs. Taylor's class took a poll of their favorite types of books. The results are listed below.

Student	Type of Book	Student	Type of Book
Austin	Adventure	Jason	Biography
Logan	Mystery	Calli	Biography
Caitlyn	Adventure	Seth	Science Fiction
Brandon	Mystery	Jade	Adventure
Jose	Adventure	Sean	Science Fiction
Nicole	Fantasy	Cielito	Science Fiction
Paris	Fantasy	Kortney	Science Fiction
Nico	Mystery	Payton	Adventure

- a. Use tally marks to show how many students choose each type of book.

Adventure	HH
Mystery	III
Fantasy	II
Biography	II

Attempt to Solve Problem;
Process Development Severely
Lacking

- b. Use the class information to make a graph. Label the graph.

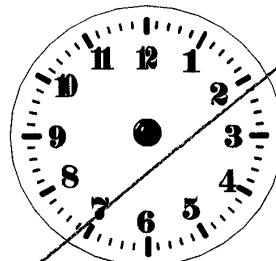
student	ty prof book	tallyes	student	ty prof book	tallyes
Austin	Adventure	III	Jason	Biography	II
logan	Mystery	III	calli	Biography	III
caitlyn	Adventure	II	seth	Science	II
Brandon	Mystery	II	Jade	Adventure	
JOSE	Adventure	III	sean	Science	
Nicole	Fantasy		Cielito	Science	
Paris	Fantasy		Kortney	Science	
Nico	Mystery		Payton	Adventure	

- c. Study the graph. Write two facts you learned from the graph.

4. Sam reads 20 minutes each day.

- a. How much time does he read in one week?
Show or explain how you found your answer.

$$\begin{array}{r} 20 \\ \times 7 \\ \hline 140 \end{array}$$



- b. Sam goes to bed at 8:45 PM. If he wants to read 20 minutes before going to bed, what time must he start reading? *Show or explain how you found your answer.*

7:50

- c. The next morning Sam finishes breakfast at 7:50 AM. If he starts reading at 7:50 AM, what time will he finish his reading for the day? *Show or explain how you found your answer.*

5. There are three numbers in Chrissy's bicycle lock combination. They are 2, 7, and 9. Unfortunately, Chrissy cannot remember the correct order of the three numbers.

- a. List all possible ways the numbers could be ordered for Chrissy's lock.

mail phone
plane

- b. It takes Chrissy **30 seconds** to try each different order. If she has to try them all, how long will it take for her to open her lock? *Show or explain how you found your answer.*

145 SEC

- c. Nick's lock combination has **four** numbers: 2, 7, 9, and 5. How many possible ways might these numbers be ordered? *Show or explain how you found your answer.*

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Lack of Understanding